

What is claimed is

1. A MOSFET gate structure comprising:
a gate dielectric overlying a substrate;
a predominantly niobium monoxide gate overlying the gate dielectric.
2. The gate structure of claim 1, wherein the predominantly niobium monoxide gate has a work function between approximately 4.1 eV and 4.4 eV.
3. The gate structure of claim 1, wherein the gate dielectric is silicon dioxide.
4. The gate structure of claim 1, wherein the gate dielectric comprises a high-k gate dielectric material.
5. The gate structure of claim 4, wherein the high-k gate dielectric material comprises HfO_2 , ZrO_2 , Al_2O_3 , Ta_2O_5 , HfAlO or HfSiO_4 .
6. The gate structure of claim 1, further comprising a capping layer overlying the niobium monoxide gate.
7. The gate structure of claim 6, wherein the capping layer is silicon nitride.

8. The gate structure of claim 6, wherein the capping layer is a conductive barrier metal.
9. The method of claim 8, wherein the conductive barrier metal is TiN.
10. A MOSFET gate structure comprising:
 - a high-k gate dielectric overlying a substrate;
 - a conductive metal-monoxide layer having a work function of between approximately 4.1 eV and 4.4 eV overlying the gate dielectric.
11. The MOSFET gate structure of claim 10, wherein the conductive metal-monoxide comprises niobium oxide.